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October 18, 1996

Mr. Harry Ng
International Bureau
Federal Communications Commission
2000 M Street, N.W., Room 512
Washington, DC 20554

EX PARTE PRESENTATION

RE: ET Docket No. 96-102

Dear Mr. Ng:

This letter is written on behalf of L/Q Licensee, Inc. (LQL), in response to your inquiry regarding operation of unlicensed, NII/SUPERNet devices. See Notice of Proposed Rule Making, 11 FCC Rcd 7205 (1996).

First, LQL has provided the enclosed technical analysis to describe the impact on MSS feeder links operating in the 5150-5250 MHz band of operation of NII/SUPERNet devices -- indoors only -- with a nominal EIRP density of 10 mw/MHz, or -20 dBW/MHz, over a 20 MHz bandwidth.

Second, in its Comments and Reply Comments in this proceeding, LQL has commented on the comparison of NII/SUPERNet devices in the United States to High Performance Radio Local Area Network (HIPERLAN) systems in Europe. Comparing the operation of NII/SUPERNet to HIPERLAN is inapt for several reasons outlined in those comments.

Moreover, it is LQL's understanding that performance parameters for HIPERLAN in the 5150-5250 MHz band in Europe have not yet been adopted. At the recent meeting of ITU Sub Working Group 4A-3 in Rio de Janeiro, a draft new question was adopted to study frequency sharing between systems in the Fixed Satellite Service and Wireless Digital Networks (Document 4A/TEMP/74-E). Therefore, assuming specific parameters for HIPERLAN may be premature.

LQL also notes that the Commission has sought to develop NII/SUPERNet devices under a Part 15 regulatory regime. Without regard to the regulatory

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regime that may be applicable in Europe, in the United States, Part 15 devices are precluded by statute and rule from causing harmful interference to facilities of a licensed service and must cease operation if they do. In its Comments and Reply Comments in this proceeding, LQL has demonstrated that there is substantial potential that widespread deployment of NII/SUPERNet devices would result in harmful interference to MSS feeder links. Adoption of standards for operation of HIPERLAN in Europe cannot abrogate the obligations imposed upon Part 15 devices by Section 301 of the Communications Act of 1934, as amended, or Part 15 of the Commission's Rules.

Should there be any questions regarding this matter, please communicate with Mr. Charles Windett or the undersigned. In accordance with Section 1.1206(a) of the Commission's Rules, two copies of this letter are being submitted for inclusion in the file referenced above.

Respectfully submitted,

L/Q LICENSEE, INC.

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TECHNICAL ANALYSIS

This response closely follows the Technical Analysis in LQL's Comments. The following analysis is performed for interference levels which represent an increase in feeder uplink noise density of 0.1 percent and commonly referred to as 0.1 percent ΔT/T. For a satellite receive system noise temperature of 1000 K the interference noise density must be -228.6 dBW/Hz. The interference from a single SUPERNet device operating at an EIRP density of -20 dBW/MHz inside a building with a 5 dB attenuation loss factor[1] would provide a noise density of -253.7 dBW/Hz or 25.1 dB below the 0.1 percent limit. This would allow 323 SUPERNet devices to operate on this one channel. Assuming that five wireless channels could operate without guardbands, then 1615 units could transmit simultaneously within the 5150 - 5250 MHz band.

If the allowable limit of ΔT/T were to increase to 1 percent, then up to 16,150 units could operate simultaneously. The allowable interference level from these unlicensed devices should be significantly below the 6 percent ΔT/T typically used when sharing with a co-primary service since unlicensed devices must operate on a non-interference basis. Moreover, the uncertainty factor is high for the number of devices operating and controllability of the devices is virtually non-existent.

Globalstar has concerns about a proposal for 200 mw SUPERNet devices. Specifically, if a significant percentage of the units were to be operated outside, then interference levels at the satellite would increase. The manner in which frequency assignments are made to the SUPERNet devices could heavily increase usage in any given 20 MHz band and nullify the uniform distribution assumption above. The satellite receive antenna at 5 GHz has a global field-of-view which will encompass a surface area much larger than the United States. All devices operating in the United States as well as parts of Canada and Mexico within this global beam will add interference to the feeder uplink.

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[1] From NTIA Reply Comments in ET Docket No. 96-102 referencing the U.S. Department of Commerce, National Telecommunications and Information Administration, NTIA Technical Memorandum 92-155, *Preliminary Building Attenuation Model* (May 1992).

ENGINEERING DECLARATION

I, Charles Windett, hereby state as follows:

(1) I am presently Manager of Regulatory Engineering for Globalstar, L.P.

(2) I am technically qualified to comment on the feasibility of spectrum sharing between non-GSO MSS feeder uplinks and high-speed wireless data networks in the 5.15-5.25 GHz band.

(3) I have prepared the "TECHNICAL ANALYSIS" and the information presented therein is accurate.

I declare the foregoing is true and correct to the best of my knowledge, information and belief.

Signed this 17th day of October 1996 in San Jose, CA.

Charles Windett
Manager, Regulatory Engineering
Globalstar, L.P.